

**IN THE ABSTRACT**

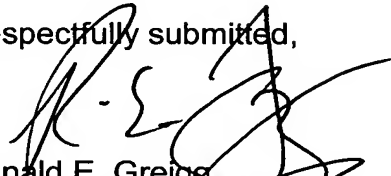
Please substitute the attached Abstract of the Disclosure with the abstract as originally filed.

**REMARKS**

The above amendments are being made to place the application in better condition for examination.

Entry of the amendment is respectfully solicited.

Respectfully submitted,



Ronald E. Greigg  
Attorney for Applicants  
Registration No. 31,517  
Customer No. 02119

Greigg & Greigg, P.L.L.C.  
1423 Powhatan Street  
Unit One  
Alexandria, VA 22314

Tel. (703) 838-5500  
Fax. (703) 838-5554

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION**

**Pag 1**, between the title and paragraph [0001]:

[0000.1] CROSS-REFERENCE TO RELATED APPLICATIONS

[0000.2] This application is a 35 U.S.C. 371 application of PCT/GB 00/02868, filed on July 28, 2000.

[0000.3] BACKGROUND OF THE INVENTION

[0000.4] Field Of The Invention

between paragraphs [0000.5] and [0001]:

[0000.6] SUMMARY OF THE INVENTION

paragraph [0001]:

[0001] The [Accordingly, the] present invention is a diaphragm pump comprising a two part casing formed of a front cover and a back cover, a diaphragm plate extending across the covers and being secured therebetween when the covers are fastened together, the diaphragm plate having a plurality of similarly defined circular regions, the front cover having substantially axially aligned inlet and outlet ports, each leading to mutually exclusive inlet and outlet chambers respectively, a valve housing securable inside the front cover and having defined therein an outlet dished valve seat with a correspondingly concave resilient valve seated therein, the outlet valve seating having fluid passages therethrough, and a plurality of inlet valve seats, equal in number to the number of regions, each being similarly dished and having a correspondingly concave resilient valve seated therein, each inlet valve seat having fluid passages therethrough, the outlet valve being in fluid communication with the outlet chamber and the inlet valves being in fluid communication with the inlet chamber, and a wobble plate

positioned in the back cover and having a central boss and a plurality of similar piston sections equal in number to the number of circular regions on the diaphragm, the piston sections and circular regions being correspondingly secured together, the wobble plate being subject to nutating motion to cause reciprocating action by the circular regions and provide a pumping action.

**Page 3, between paragraphs [0005] and [0006]:**

[0005.5] BRIEF DESCRIPTION OF THE DRAWINGS

paragraph [0009]:

[0009] Figs. 3A and 3B are respectively exploded perspective views from above and from below of a valve housing of the pump;

**Page 4, between paragraphs [0015] and [0016]:**

[0015.5] DESCRIPTION ON THE PREFERRED EMBODIMENTS

paragraph [0017]:

[0017] The front cover 10 has substantially axially aligned inlet and outlet ports 18, 20, each leading to a mutually exclusive inlet and outlet chambers 22,24, respectively. The outlet chamber 24 is provided centrally of the front cover 10 and has a wall surround 25 through which the outlet port 20 communicates. The inlet chamber 22 is defined between the wall surround 25 and [a wall] the sidewall of the front cover 10.

paragraph [0018]:

[0018] A valve housing 26 is substantially planar and is secured inside the front cover 10 and has defined therein on one side an outlet dished valve seat 28 with a correspondingly concave resilient valve 30 seated therein. The outlet valve seat 28 has a gridded area 32 forming fluid passages therethrough and a central hole 72. On the

opposite side of the housing 26, a plurality of four inlet valve seats 34 are provided, each being similarly dished and having a corresponding concave resilient valve 36 seated therein, each inlet valve seat 34 having arcuate gridded areas 38 forming fluid passages therethrough and a central hole 73. The outlet valve seat 28 is in fluid communication with outlet chamber 24 and the inlet valve seats 34 are in fluid communication with the inlet chamber 22. Each valve 30 and 36 is formed of a dished, part-spherical portion having a post 35 radially outstanding from its rear convex face, the post having bulbous portion 37, the valve being seated by the post 35 being pushed through the hole 72,73 respectively with the bulbous portion 37 holding the valve in position preventing unintentional removal.

**Page 5, paragraph [0023]:**

[0023] The back cover 12 of the casing is secured to an electric motor 76 with the drive shaft connected via an eccentric 78 to the bearing 54 through the back cover 12. The eccentric 78 has a knurled portion 79 to fit into the wobble plate 40 with the drive shaft of the motor [locating] located in bore 81. The motor 76 has a mounting bracket 56 with a series of mounting feet 58 fitted thereto, the feet 58 each being substantially ovoid in plan and of resilient material to dampen vibratory movement. The greater dimensioned end of each foot 58 has an upstanding headed stub pillar 60, the pillar 60 mating in an open slot 62 in the bracket 56. The slot 62 is narrower at its open end to hold the respective foot 58 in the slot. The feet 58 are similarly provided with two fixing holes 64 at their narrower end and being capable of rotating in and about their respective mating slot 62.

**Pag 6, paragraph [0024]:**

[0024] The valve housing 26 is fixed to the front cover 10 by a screw (not shown). An integral pressure switch (not shown) is provided in the back cover 12 with the diaphragm plate 14 being provided with a fifth defined circular region 66, smaller than the other regions 16, the rear diaphragm support plate 50 having a similarly shaped aperture 68 with wall surround to accommodate the circular region 66. A micro-switch (not shown) is retained in an enclosure 82 on the back cover 12 by an upstand 80 in the rear diaphragm support plate 50, and is activated by movement of the fifth circular region 66 serving as a pressure switch pad, the electrical wires to the micro-switch being fed internally from the front face of the motor. The valve housing 26, on the same side as the inlet valve seats 34 are positioned, is provided with a track 70 between two inlet valve seats 34 leading from a hole 72 exiting on that side and centrally provided in the outlet valve seat 28 provided on the opposite side, the track 70 mating with a corresponding track 74 provided on the diaphragm plate 14. The mated tracks 70, 74 form a passage between the hole 72 and the fifth circular region 66 whereby any fluid leaving the outlet chamber 24 when under pressure through the screw travels along the passage and fills a void at the pressure pad on the opposite side of the diaphragm plate 14 from the pressure switch causing activation of the micro-switch to stop the pump.

**Page 7, after paragraph [0029]:**

[0030] The foregoing relates to preferred exemplary embodiments of the invention, it being understood that other variants and embodiments thereof are possible within the spirit and scope of the invention, the latter being defined by the appended claims.